AI Gleason Grading in the Wild

Paige AI

Paige participated in the AI In the Wild challenge, organized by Radbaud University, at this year's European Congress of Pathology.

The challenge consisted of putting to the test several AI algorithms designed for prostatic biopsy diagnosis, against a defiant dataset of thirty prostatic biopsies. The dataset contained both benign and positive for cancer slides spanning multiple ISUP grades, originating from multiple countries, stained with different staining methods (including saffron staining), and digitized using multiple scanners. One of the main requirements was that the participating

AI algorithms could not be retrained or calibrated to better cope with the challenging dataset, and instead had to perform 'out of the box'. Nine pathologists were asked to review each biopsy slide and a majority consensus was reached with the correct diagnosis for each slide in advance of the challenge. Paige Prostate Detect and Paige Prostate Grade & Quantify were then run on the slides, revealing very robust results.

Paige Prostate Detect showed a

SENSITIVITY **96%** **SPECIFICITY**

in the detection of prostate cancer in this challenging dataset
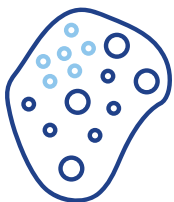
The remaining malignant slides were correctly classified within the same ISUP risk group

Both Paige Prostate applications performed extremely well out-of-the-box, without tuning or recalibration, even **on saffron (HES) stained slides**

Paige Prostate Grade & Quantify showed

100% concordance

with the expert pathologists reference standard in **17 slides**

These excellent results demonstrate that Paige's prostate AI generalizes extremely well in any setting, coping with slides with different preanalytical variables, stain types, and WSI formats.